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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/697,492

10/27/2000

Pascal Lefebvre

Q61274

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08/03/2004

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EXAMINER

PHAN, MAN U

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/697,492

Applicant(s)

LEFEBVRE, PASCAL

Examiner

Man Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-4 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Response to Amendment and Argument

1. This communication is in response to applicant's 04/29/2004 Amendment in the application of Lefebvre for "A Telecommunication network and a method for controlling such network" filed 10/27/2000. This application claims foreign priority based on an application filed in European Patent Office (EPO) 99402883.5 - dated 11/19/1999. The proposed amendment to the claims and response have been entered and made of record. Claims 5-7 have been canceled per Applicant's request. Claims 1-4, 8-9 have been amended, and claims 10-12 have been added in independent form. Claims 1-4, 8-12 are pending in the present application.

2. Applicant's amendment and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's argument with respect to the pending claims have been fully considered, but they are not persuasive for at least the following reasons.

3. Applicant's argument with respect to the rejected claims of record (page 9, last paragraph) that the cited references do not disclose any information regarding bandwidth allocation to both an upward and downward virtual path. However, Aida (EP 0814632A2) discloses in Fig. 1 a block circuit diagram illustrated the structure of an output buffer in ATM connection admission control, in which the buffer state information is responsible for allocating bandwidth. In this case, the purpose of connection admission control is for bandwidth allocation, and Aida is

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applied herein for the teaching of the Connection Admission Control (CAC) in optimizing the bandwidth allocation within the network. Aida further teaches Fig. 2 illustrated a CAC section, in which a connection admission controller in communication with the service category traffic parameters (rate monitor) to determine a bandwidth allocation for a requested connection in response to the traffic flow, and to permit oversubscription of allocated bandwidth based on an allocation factor when measured traffic flow is less than a subscribed bandwidth provided by at least one traffic parameter of the connection request (page 4, lines 43 plus and page 6, lines 15 plus). Furthermore, ATM is a standard that defines high-load, high speed, fixed size packet switching with dynamic bandwidth allocation. Therefore, the Examiner maintains that the references cited and applied in the last office actions.

Claim Objections

4. Claim 2 is objected to because of the following informalities: "the control means" in lines 1 & 5 should read --call control means-- for the purpose of art rejection. Appropriate correction is required.

Claim Rejections - 35 USC ' 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 recites the limitations "the users", "the upward data rate" in line 2; "the bandwidth" in line 6; "the upward virtual paths" in line 8. There is insufficient antecedent basis for these limitations in the claim.

7. Claim 2 recites the limitation "the maximum bandwidth" in line 2; and "the total bandwidth" in line 6. There is insufficient antecedent basis for these limitations in claim 2.

8. Claims 2 & 11 recites "the virtual paths" in line 7. It's not clear if this "virtual paths" refers to the "downward virtual path" or "upward virtual paths" as previously mentioned in claims 1 & 10.

9. Claims 3 & 4 recite limitation "the downward direction" in line 2. There is insufficient antecedent basis for these limitations in claims 3, 4.

10. Claim 12 recites the limitation "the bandwidth" in line 3. There is insufficient antecedent basis for these limitations in claim 12.

Claim Rejections - 35 USC ' 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by prior art under 35 U.S.C. 103(a).

12. Claims 1-4 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aida et al. (EP 0814632) in view of ATM standard.

In so far, as understood, with respect to claims 1-2 and 10-11, Aida et al discloses a novel method and system for managing traffic between endpoints of an ATM network. Aida et al., does not explicitly teach the details of ATM standard of service categories and traffic contracts in an ATM network. The ATM standards (U) teaches the details of ATM service classes and traffic contracts.

As understood with regarding claims 1-2 and 10-11, Aida et al., teaches a multiplexer (fig. 7, ATM exchanger) in which the user cells are assigned a virtual channel (fig. 7 see downward direction from user to receiving end user) based on a given quality of service (page 5 lines 29- page 6 line 11) per the ATM standard. Multiple virtual channels may share a virtual path as is known the art for ATM transmission. Each virtual channel is assigned a buffer memory for the ATM cells to which assigned a priority corresponding to the given quality of service (page 5 lines 34-39, and fig. 1) as required by claims 2, 4, and 6. Regarding claim 7, the quality of service categories include CBR, VBR RT, VBR NRT and UBR (page 5 lines 29-30) and apply to each direction of transmission since a virtual path is setup in each direction of transmission (claim 9), since this is known in the art for ATM standard. Regarding claim 8, the system

manages the upstream and downstream requests independently and according to the available bandwidth on the virtual path. The virtual path is setup independently for each direction of transmission. Therefore the system supports variable downstream bandwidth and fixed upstream bandwidth, using CBR for example. The procedure is detailed on page 6 line 46 – page 11 line 9. The control means is shown in fig. 2 and includes buffer memory (fig. 1) as required by claim 2, and this is equivalent to a telecommunication network, preferable an ATM network, in which the downward data rate, from the network to the users is greater than the upward data rate, from the users to the network, comprising multiplexers for establishing connections, constituting virtual channels, between users and the network, the virtual channels being grouped into virtual paths, characterized in that, in each multiplexer close to the user, the bandwidth allocated to each downward virtual path is variable under the control of a means, such as a call control means, provided upstream in a switching node and in that the upward virtual paths have a fixed bandwidth (claim 1); further characterized in that the control means is provided with a memory containing information representing the maximum bandwidth allocated downwardly to each user and representing the bandwidth allocated downwardly to the interface, or between the user's multiplexer and the switching node. This control means using this information in order to limit the bandwidth allocated to each user to its authorized maximum, and in order to limit the total bandwidth allocated to the virtual paths to a value which is at most equal to the interface, or to interfaces (claim 2); further characterized in that the multiplexer which is the closest to the user has, for each virtual channel of the downward direction, a buffer memory for ATM cells with a given priority; a multiplexer constituting a node of a telecommunication network for transmitting ATM cells, this node being close to the user, characterized in that, in this

multiplexer, each downward virtual path has a plurality of virtual channels to each of which is allocated a given quality of service (priority).

One skilled in the art would have recognized the need for increase the system performance and improving system bandwidth utilization, and would have applied the features defined in the ATM standard process in network control, and to dynamically assign bandwidth to a downward virtual path while holding the upward path to a fixed bandwidth to support asymmetrical bandwidth situation as in the internet connection which may have a large, variable downstream requirement while the upstream bandwidth requirement is fixed, in addition to managing QoS requirement into Aida's novel use of a the multi-class ATM connection admission control. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply the ATM standard processing into Aida's method and device for multiclass ATM connection admission control with the motivation being to provide a method and system for managing the available network bandwidth more efficiently for situations requiring asymmetrical bandwidth.

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aida et al. (Ep 0814632A2) in view of ATM standard, as applied to the claims above, and further in view of Chiu et al. (US#6,597,689).

In so far, as understood with regarding claim 3, this claim differs from the claims above in that the claim requires the use of Switched Virtual Circuits (SVC) and Permanent Virtual Circuits (PVC). In the same field of endeavor, Chiu et al. teaches the use of PVCs and SVCs for setting up virtual connections in an ATM network to meet the quality of service requirements,

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and for networks with asymmetrical user bandwidth requirement (Col. 7, line 22 – Col. 8, line 60).

Regarding claims 8-9, 12, they are method claims corresponding to the apparatus claims 1-4, 10-11 above. Therefore, claims 8-9, 12 are analyzed and rejected as previously discussed with respect to claims 1-4, 10-11.

One skilled in the art would have recognized the need for increase the system performance and improving system bandwidth utilization, and would have applied Chiu et al.'s teaching of the SVCs and PVCs signaling system, and the ATM standard process in network control into Aida's novel use of a the multi-class ATM connection admission control. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Chiu's SVC signaling system and method, and the ATM standard processing into Aida's method and device for multiclass ATM connection admission control with the motivation being to provide a method and system for improving the system performance through the use of SVCs to dynamically assign bandwidth as needed to meet the QoS requirement.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lyles et al. (US# 6,563,829) discloses a method for providing integrated packet services over a shared media network.

Jones (US# 6,310,909) discloses a DSL rate adaptation

Furukawa et al. (US# 6,167,095) discloses a method and apparatus for variably allocating upstream and downstream communication spectra.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (703)305-1029. The examiner can normally be reached on Mon - Fri from 6:30 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3988.

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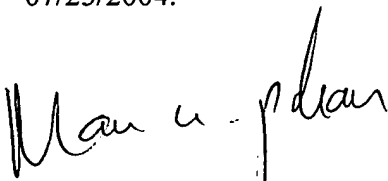
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Mphan

07/25/2004.

A handwritten signature in cursive script, appearing to read "Man u - phan".

**MAN PHAN
PATENT EXAMINER**